

CLAIMS

What is claimed is:

- 1 1. An apparatus, comprising: /
2 a first circuit to store a global confidence history;
3 a second circuit to store a global prediction value history;
4 a first index function to produce a first index signal from said
5 global confidence history; and
6 a first pattern history table to retrieve a value responsive to said
7 first index signal.
- 1 2. The apparatus of claim 1, wherein said first index function
2 to use an instruction pointer signal.
- 1 3. The apparatus of claim 2, wherein said first index function
2 to use said global prediction value history.
- 1 4. The apparatus of claim 1, wherein said first pattern history
2 table to store a confidence count.
- 1 5. The apparatus of claim 4, wherein said confidence count to
2 increment subsequent to a correct prediction.
- 1 6. The apparatus of claim 4, wherein said confidence count to
2 decrement on an incorrect prediction.

1 7. The apparatus of claim 4, wherein said confidence count to
2 clear on an incorrect prediction.

1 8. The apparatus of claim 4, wherein said confidence count to
2 form a confidence value signal by utilizing a threshold.

1 9. The apparatus of claim 7, wherein said confidence value
2 signal to update said global confidence history.

1 10. The apparatus of claim 7, further comprising a second
2 pattern history table to retrieve a predicted value.

1 11. The apparatus of claim 10, wherein said confidence value
2 signal to mask said predicted value.

1 12. The apparatus of claim 11, wherein said apparatus to issue
2 a predicted value signal including combinations predicted true and
3 confident, predicted false and confident, and not confident.

1 13. The apparatus of claim 1, wherein said first circuit and said
2 second circuit are speculative registers.

1 14. The apparatus of claim 13, further comprising a third
2 circuit to store an architectural global confidence history, and a fourth
3 circuit to store an architectural global prediction value history, wherein
4 said third circuit to update said first circuit and said fourth circuit to
5 update said second circuit.

1 15. A method, comprising:
2 creating a first index using a global confidence history; and
3 applying said first index to a pattern history table to retrieve a
4 value.

1 16. The method of claim 15, wherein said creating also uses an
2 instruction pointer.

1 17. The method of claim 15, wherein said creating also uses a
2 global prediction value history.

1 18. The method of claim 15, wherein said value includes a
2 confidence count.

1 19. The method of claim 18, further comprising comparing said
2 confidence count to a threshold.

1 20. The method of claim 19, further comprising issuing a
2 confidence value responsive to said comparing.

1 21. The method of claim 20, further comprising updating said
2 global confidence history with said confidence value.

1 22. The method of claim 18, wherein said confidence count is
2 reset subsequent to an incorrect prediction.

1 23. A system, comprising: /
2 a processor including a first circuit to store a global confidence
3 history, a first index function to produce a first index signal from said
4 global confidence history, and a first pattern history table to retrieve a
5 value responsive to said first index signal
6 an interface to couple said processor to an input/output circuit;
7 and
8 an audio input/output circuit.

1 24. The system of claim 23, wherein said first index function to
2 use an instruction pointer signal.

1 25. The system of claim 24, wherein said first index function to
2 use said global prediction value history.

1 26. The system of claim 23, wherein said first pattern history
2 table to store a confidence count.

1 27. The system of claim 26, wherein said confidence count to
2 increment subsequent to a correct prediction.

1 28. The system of claim 26, wherein said confidence count to
2 clear on an incorrect prediction.

1 29. The system of claim 26, wherein said confidence count to
2 form a confidence value signal by utilizing a threshold.

1 30. The system of claim 29, wherein said confidence value
2 signal to update said global confidence history.

1 31. The system of claim 26, further comprising a second
2 pattern history table to retrieve a predicted value.

1 32. The system of claim 26, wherein said confidence value
2 signal to mask said predicted value.

1 33. The system of claim 32, wherein said apparatus to issue a
2 predicted value signal including combinations predicted true and
3 confident, predicted false and confident, and not confident.

1 34. The system of claim 23, wherein said first circuit and said
2 second circuit are speculative registers.

1 35. The system of claim 34, further comprising a third circuit to
2 store an architectural global confidence history, and a fourth circuit to
3 store an architectural global prediction value history, wherein said third
4 circuit to update said first circuit and said fourth circuit to update said
5 second circuit.

1 36. An apparatus, comprising: /
2 means for creating a first index using a global confidence history;
3 and
4 means for applying said first index to a pattern history table to
5 retrieve a value.

1 37. The apparatus of claim 36, wherein said creating also uses
2 an instruction pointer.

1 38. The apparatus of claim 36, wherein said creating also uses
2 a global prediction value history.

1 39. The apparatus of claim 36, wherein said value includes a
2 confidence count.

1 40. The apparatus of claim 39, further comprising comparing
2 said confidence count to a threshold.

1 41. The apparatus of claim 40, further comprising issuing a
2 confidence value responsive to said comparing.

1 42. The apparatus of claim 41, further comprising updating
2 said global confidence history with said confidence value.

1 43. The apparatus of claim 39, wherein said confidence count
2 is reset subsequent to an incorrect prediction.